Missouri Botanical Garden
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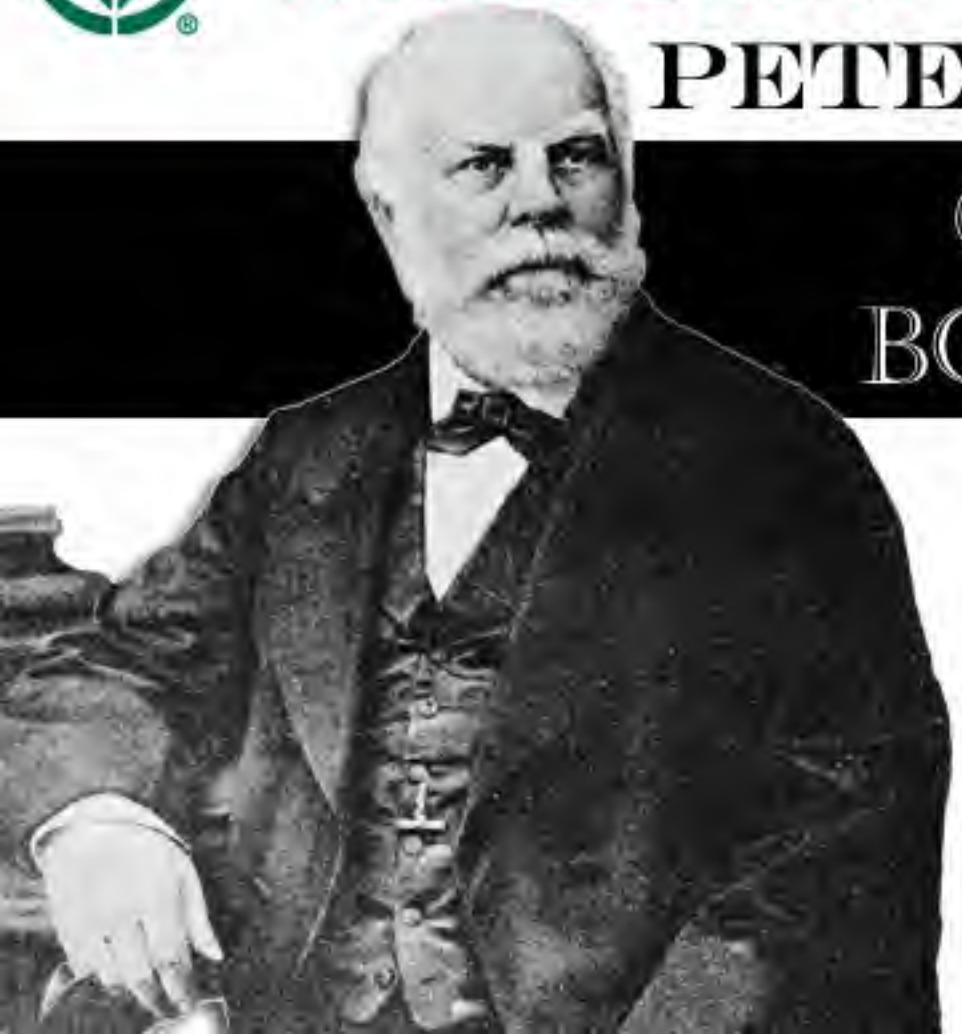
George Engelmann Botanical Notebooks



Pagination Note:
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Pyrus nivalis Jacq.

Spr II, 510
RII, 288

1296161

Austria

H. B. Würzb. 1822

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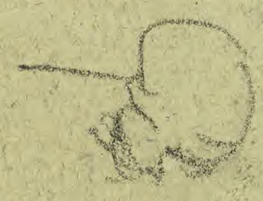
MISSOURI BOTANICAL GARDEN

Vol. Spores 2 wrap.

Memoranda

160-207



Isoetes

22681

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anceps Braun = Lit. (Braunii var.)
adspersa Braun (1862 or earlier)
amazonica Braun
Agorius Durr (before 1867)
~~Elat. = E. exalta~~

pygmaea Eng. Am Nat 1874 vol 8
perpusilla Braun = Lit (Lechler Braun)
Peralderiana Durr (Braun & velata) grey
phaeospora Durr Bull. Soc Bot 1864. p. 103 (Nolte)

Braunii Durr. 1864 Bull. Soc Bot. p. 101
Bolanderi Eng. Am Nat. 1874. vol 8
Boottii Braun = Lit (Braun var) = Gray Man 1868. p. 676
Borjana Durr (grey & velata) 1862 or earlier)
Bractea Wilk & Lange Bot Hor hisp. 1. 14 (1866?)
Bruchyglossa Braun Verh. bot Ver. Brand. b. 3. 4. p. 328 (1867?)
Bullen Lloyd = Bot Gazette

riparia Eng. 1846 Flora no 12

Canadensis Braun = Lit.
Chapmani Eng. Am. Nat. = Lit.
Coromandeliana Lit
Cubensis Engl. mention = Braun Austral Insects 1868 p. 524
Drummondii Braun Berl. Monatsb. 18 1868 p. 542 (Sphagnum)
Durieui Bory 1844 Compt. rend. 18
Dubia Jenny Comment. crit. ital no 2 (1861) p. 104
Delalandii Lloyd = Hystrix.
echinospora Durr Bull. 8. p. 164. 1861 Var. 1868 = Gr Man.
Englemanni Braun 1846 Flora, No 12
elatior F. Müller ms. Hb. Braun Linnaea 1852
= Berl Monatsb. 1868 p. 536

Sachanta Eng = Gray Manual. delete
setacea Bosc (others have Delile)
Stuartii Braun = Berl Monatsberich 1868 p. 539

Flaccida Schultes = 1846 = Flora

~~granulata C. incl Georgi~~
~~Gaspian Eng = Elat. incl Schreb~~
Gymnoxpa Gaud.
Gardneriana
Gemmii Braun Berl Monatsberich 1868 p. 535
Hookeri Braun Berl Monatsb 1868 p. 538
Hystrix Durr Lit 1844 Bory = Compt. rend 18.
humilior F. Müller, Hb. Braun Linnaea 1852 = Stuartii
Japonica Braun Monatsber. Ac. Berl. 1861. 459
Kirkii Braun Monatsber ac. Berl 1869
lacustris Lin 1751
longissima Bory (ad velatam) Alger. - before 1848
Lechleri Metten (1862 or earlier)
Ligustica Notaris = Durieui

Malbranciana Castle Notaris Linn. 30. 740 (1860
muricata Durr (Braun var) 1864 Bull Soc Bot p. 100 X1
melanopoda Gay 1864 Bull Soc Bot p. 102
microspora Durr (= Lacustris) 1864 Bull Soc Bot p. 101 X1.
Mulleri Braun Berl Monatsb. 1868 p. 541
melanospora Lloyd Notes Ac 2. 395 1848

Nuttalli Braun ap. Eng. Am Nat. 1874 vol 8

names from Spory ? adspersa
echinospora
muricata
phaeospora
sachanta Gray
Venetosa 2d
~~granulata~~ Gray

Tuckermani Braun ~~Sch~~ Engl = Gray Man 1868 ~~1870~~ p. 676
tenuissima Boreau (1862 or earlier)
Tegulensis Gennari (~~1862 or earlier~~) Comment. crit. ital No 1. 1861 p. 42
tripus Braun Berl Monatsber. 1868 p. 534
Tasmanica Gunn = Fl. = F. elatior Müller
a mixture of sheets for Braun

velata Braun (~~1862 or earlier~~)
Descr. Alger 1848 t. 37 f. 1
~~Drummondii Braun Berl Monatsb~~

Olgaeopsis (mentioned = Braun Austral Insect 1868 p. 524)

See Braun Austral Insects for Key

1844 3 new algerian Boats
Durieu, Hystrix

Yah Braun
Australish
hemisphaerical
hardwick

? Braun Upsimall Swartz
? Braun Abhandl. der Swartz Akad
Berl Acad 1867

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Allenton, July 6–75–

Dr. Engelmann,

Dear Sir:

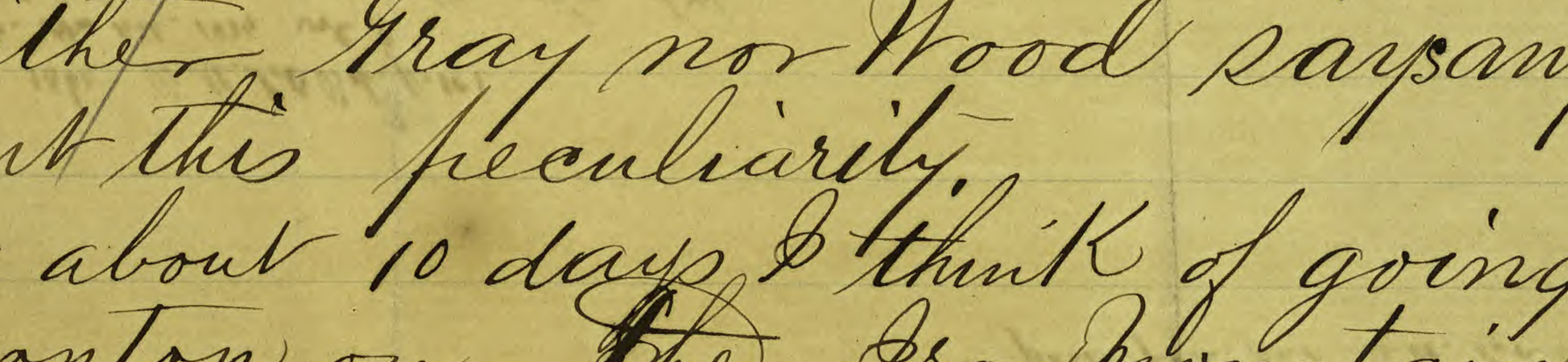
I was out again yesterday and send you some of the specimens collected.

The ferns, with the exception of the Pteris, were all collected in one place, some on the bare rocks, others on soil adhering to the rocks & cliffs with the rest I send a Saxifrage F. The leaves are usually more or less dentate, but this one has the leaves entire. & Accompanying the others are fruiting specimens of Ostrya Va. Cygnus A. Ptelea trifoliata, and Ginseng. This last is an unusually large specimen. Is the Hepatica, triloba, or acuta?

The Penstemon I take for Digitalis. With the usual form, and found the same root & often come across specimens with 3 leaves in a whorl.

Neither Gray nor Wood say anything about this peculiarity.

In about 10 days I think of going to Pronton on the Iron Mountain R.R. and shall send you specimens from there.



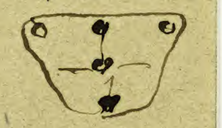
A Braun's letter of Febr. 1867

Stomata in Isoetes after the treatment with Alcohol, to extract colouring matter use First Iodin, to colour the amylon in the cells bordering the stoma. — Useless, since other cells also contain amylaceous matter.

peripheral
fibrous fascicles: bast fibres or bastcells are more difficult to find — very thin sections are necessary, which unfold after long boiling and after treatment with caustic potash

Isoetes Carolinensis a pygmaea good species! Characters

Isoetes Engelmanni has constantly 4 peripheral bast-bundles but I. riparia none!



I. Bootii Braun = Lehm is a plant collected itself out of water by Booth Sept 18 1867 — many stomata otherwise similar to "Braunii"

I. echinospora var ambigua Braun is what we used to call Braunii (Isoetes Braunii Ung. got is a tertiary plant with rare stomata)

I. Louisiana macrospora "Catskill" Bethlehem and other = N. Petersburg Herbar.

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nobis. (= Ann. sept. Schweinitz are identical, as doubtless collected together by Schweinitz and probably at the Catskills.)

I. undulata has more than 4 peripheral cast boundary cells

I. caustica from Uxbridge right and also I. riparia from there

Brown's division of Isoetes in

without peripheral cast boundary cells

with stomata

with few stomata

with numerous stomata

with peripheral cast boundary cells

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Bem.: Monatsberichte der K. Acad. d. Wiss. Berlin.

Isoetes Arten der Insel Sardinien

A. Braun 1864

p. 556. Truncus Cort. & Matter. Caudex Ainbl. etc.

two or three lobed

558 more or less depressed, concave on the upper surface

559 Growth of Trunces by the formation of new parenchyma from a ring [sheath?] surrounding the small ligneous body and between it and the bark; the older bark-parenchyma is then pushed outward, and at last decays and is thrown off in sooner or later [apparently never in European species as soon as in our American ones]

561 leaves of the water Isoetes (Caroliniana etc) remain green all winter. Die in spring Those of the land isoetes dry up in summer & fall

562 Number of leaves variable

563 Leaves with Macrosporangia about equal in number with those bearing microsporangia or rather fewer — and outside of them; inner most leaves sterile

565 the lowest, broad, part of the leaf is the vagina

566 the greater part may be called lamina, though rather a petiole

Fovea is the excavation on the inner surface of the lamina for the reception of the sporangium

velum is the narrower or broader edge of the fovea which partially covers the sporangium.

Velum wanting in I. Malinverniana

I. subtilis space between velum & lamina

567 indicated by a sharp edge I. setacea, adspersa et nanna, I. Engelm. ripens echinospora & lacustris broad, covering ½ or more of the fovea: I. velata Tegulensis, tenuissima etc. — covering the entire fovea: I. Hystrix, Durieui etc

Fovcola is a narrow transverse groove above the fovea from which issues the lingula

569 Labium is the lower edge of the fovcola, straight or produced

569 Sella is the bridge between fovea & foveola, which is produced below in the velum & above in the labium.

570 The Glossopodium is a horseshoe-shaped organ, open upwards, at the base of the Lingula in the tissue of the Cap. Very

573 different forms of the Lingula, longer or shorter, etc not or not much longer than broad: I. Carnutis, echinospora etc longest in adspersa & Hystrix still longer: velata (3:1) and longest (4:1): I. setacea, where it is 6 mm long and equal to the sporangium.

574 Labium a straight margin in I. Carnutis etc, a curve almost semicircular in I. Hystrix, setacea, triangular in I. Regularis and as long as Lingula: I. Malinvernianæ

575 Area is the spongy part of the vagina around the fovea, full of air holes, white, etc. — an important

576 Margo membranaceus of the Vagina, often contained into the lower part of the leaf itself — very variable and larger on the outer than inner leaves.

578 Indurations of cells in the base of the leaf — I. Hystrix &

581 Desvauxii, persistent part = phyllopodium

582 Length of leaves variable. I. Ceylonica as long as 30 Centim. = 12 inches I. Malinvernianæ & I. glaucifolia short even 6 Cent. = 2½ inches

583 Width of leaves not more than 3 millimetres.

Section of leaves.

584 Structure of leaves, with 4 lacunae or air passages

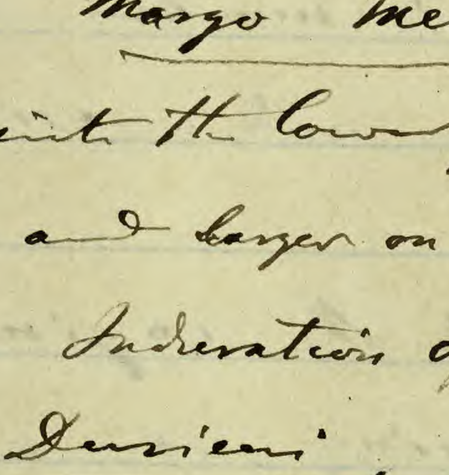
585 & septa and their different thickness, cages usually etc in the anterior and bast cells in the posterior portion of the bundle. vascular bundle with ring & screw cells

586 Stomata present or not

588 "Bast bündel" bast bundles fasciculi of liber present or not

and in the first case either 4 or 6 in number

589.



none in Carnutis & echinospora

1.2.3.4 Hystrix & Desvauxii

1—6 in the others

590 Macrospores & Macrosporangia, Microspores & Microsporangia

(Zygospores etc & Azotospores etc)

591 Walls of Sporangium & Brown (sclerodermic) cells

592 Macrospores and their different forms, angles 0.34 – 0.98 mm.

germination see Mettenius: Filices Hort. Lips. p. 208 (unsatisfactorily so)

594 their colour and size, their between 1/3 & 1/4 mm

Microspores Their form, size (0.025 – 0.040 mm,

595 and surface

598 Three groups of Azotes

no peripheric vessels

1. Aquaticae large air tubes, no stomata – Vegetation continuous – Submersed

2. Amphibiae large air tubes, stomata, & peripheric vessels – vegetation possible – Vegetation continuous or periodical – [partly emersed?]

599 3. Terrestres narrow air tubes, stomata, & peripheric vessels – vegetation possible – On land, often dry.

606 note. Microspores must be examined dry; in water the spinules are often overlooked, because too transparent

610.611 L. Tegulensis has specimens where every microsporangium contains spores with spinulose epiderm; other specimens have only microspores with loose but smooth epiderm

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11 Bolanderi Eng. Am Nat. 1874 vol 8
14 Butleri Eng. Bot Gazette Jan 1878
10 Cabellensis Engl. (name only ÷ Braun Austral Jour. 1868 p. 524
5 echinospora Durieu Bullet. 8 p. 164 (1861.
7 var. ÷ Gray Man ed. 5. 1868 p.
3 Englemanni Braun ÷ Flora 1846 No 12 × var. ÷ Gray Man. 6.
4 flavovirens Scheffelowitz op. Braun. ÷ Gr. Man. 6.
a Chapmanni Engl.
Tourneyi Lin. 1751 macrospora Durieu
1 melanospora Gray Bullet Bot Jn. 1864 p. 102
6 melanospora Engl. Trans et Nat. Acad. 3. 395 (1878)
15 Nuttalli Braun ÷ Engl. Am Nat. 1874 (vol 8)
13 pygmaea Engl. ÷ Gr. Man. 6.
12 riparia Engl. Braun ÷ Flora 1846 No 12
2 sacchanata Engl ÷ Gray Man 1868 p. 476
9 Suksdorfii Braun ÷ Engl. Gray Man. 6.
8

old Mem not
to be destroyed
after printing
attached

6a 1864 macrospora

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Isoetes Amer. Bor. & Bot. acrid. July 15 - 1875.

	Vegetatio submersa	amphibia	terrestris	Rhizoma lobis	Foliorum numerus	Foliorum Longitudo pollices	Stomata	Fasciculi fibrosi pro petiolaris	Velum	Sporangia obtecta fascia membranacea	macrospora diamet. superficies millimetra	microspora longitud.	microspora superficies millimetra	foliorum Long. centimet.	Patria
1 I. Cubana Eng				3	30-40	15	∞ 1	6	angustum	0	0.30-0.40 grosse tuberculata vermucosa	0.024-27	papillosa laeves	40	Cuba.
2. I. Lacustris Lin	1			2	10-25	2-6	0	0	angustius	0	0.66-75 cristato-tuberc	0.034-40	laeves	5-15	N. NY - Lake Sup
3 I. pygmaea Eng	1			2	5-10	½-1	0	0	angustum	0	0.36-50 tuberc. minim discretae	0.024-27	subLaeves	2-3	Calif
4 I. Tuckermani Braun	1			2	10-30	2-3	0	0	latius	1	0.44-56 infra reticulat supra cristato-tuberc	0.026-30	laeviusculae	5-8	Mass - Engld
5 I. echinospora Braunii	1			2	15-30 -20	3-6 8	parca	0	latum	1	0.40-50 spinulosae	0.026-28 30	laeves	7-15	Grand L. & Canada to Maine Lake Champlain
var robusta				2	25-70	5-8	plurima	6	latum	1	0.36-55 obtusis spinulos	0.026-31	laeves		
muricata	1/2			2	15-30	6-10	parca	0	Latissimum	0	0.44-54 obtusis spinulo	0.026-28	laeviusc	15-25	N Engld
Boottii	1/2			2	12-30	4-5	parca	0	Latissimum	1	0.40-50 gracilius spinul	0.026-28	laeviusc	10-12	New Engld
6 I. melanospora Eng	1			2	5-10	2-2½	∞ 1	0	completum	0	0.35-45 tenuiter granul	0.027-30	laeves	5-7	Georgia
7 I. saccharata Eng	1			2	10-20	2-3	1	0	angustum	1	0,40-52 granulatae	0.024	papillosae	5-7	Maryland
8. I. Bolanderi Eng	1/2			2	5-20	2-4½	1	0	Latiusculum	0	0.30-45 tuberculi minim sup confluentes	0.026-31	papillosae	5-12	Calif - Oregon
9 I. riparia Eng	1			2	15-30	4-8	1	0	latius	1	0.44-60 infra reticulat supra cristato tuberc	0.026-32	tuberculat	10-20	N Engl - Penns
10. I. flaccida Bradl	1/2			2	10-20	15-24 4-6	1	4	Clausum Completum	0	0.38-42 30-38 tenuiter rugulos vermiculatae	0.019?		40 60	Florida
var Chapmani	1/2			2	30	18	1	4	Clausum Completum	0	0.44-55 infra reticulat supra vermiculatae	0.026-30	papillosae	45	Florida
11 I. Engelmanni Br.		1		2	25-100	9-20	1	4	angustum	0	0.38-48 parvo reticul	0.024-28	laeviusc.	20-50	N Eng - Mass & Missouri
var gracilis	1/2			2	8-12	9-12	1	4	angustum	0	0.38-48 " "	0.024-28	laeviusc	20-30	N Eng - Pa
var valida		1		2	50-200	18-25	1	4	Latius	0	0.32-44 " "	0.022-26	spinulos	45-60	Pa
var Georgiana		1		2	15	10-12	1	4	angustum	0	0.48-56 " "	0.028-31	laeves	25-30	Georgia
12. I. melanopoda			1	2	15-50	6-12	1	4	angust var. Latius	1	0.25-40 tenuiter vermiculatae	0.020-30	spinulosae	15-30	Iowa Ill Ten Tenn
13. I. Butleri Bx Alabamensis E		1		2	8-12 12-30	3-7 7-10		1	4	subnullum	1	0.50-63 granulatae	0.025-34	papillosae	8-18 25	Indian Territory
14 I. Nuttallii Dr		1		2	20-60	3-7	1	3	clausum Completum	0	0.35-52 depresso-tub excalatae	0.025-28	papillosae	8-18	Oregon

macrospora (& microspora) maximae : Lacustris, Alabamensis, riparia
minimae : melanopoda Cubana, flaccida, Engelmanni var valida

folia longissima Cubana
brevissima pygmaea, melanospora, saccharata, Engelmanni, flaccida, Tuckermanii, Nuttallii, Bolanderi, melanopoda Cubana
numerosissima
paucissima pygmaea, melanospora, saccharata, Bolanderi

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0 1 2 3 4 5 6 7 8 9 10 cm

13 Rudbeckia
6 Senecio
7 Aspa
4a Brau
2 Wood
26 Mimosa
6c Solanum
2 Pany
8 Bidens aristata
11 Helianthus
10 Helen
12 Bidens
14 Calea
5 Bidens.
1 Cosmos
9 Engl
3 Mark

N. Am. Isoetes, Geogr. distribution

New England & North & Northward and

I. Braunii
I. Tuckermanii
I. Carolini
I. riparia
I. Engelmanni

New York to Pennsylv

I. Carolini
I. Braunii
I riparia
I. Engelmanni

Maryland

I Saccharata

Florida

I. flaccida
I. Chapmanii

Illinois & Iowa

I. melanopoda

Missouri

I. Engelmanni

Oregon & California

I. Nuttallii
I. Californica
I pygmaea

Georgia I. Engelmanni
I melanospora

Arkansas with
I. melanopoda
I. Butleri
Texas
I. melanopoda
Wyoming
I. Bolanderi

Utah
I. Bolanderi
I. Braunii

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Chicago, Ill.

Dear Sir:

We beg leave to call your special attention to the accompanying sample of Essence or Extract of Beef, prepared by us in this City.

It is prepared from the best fresh Beef, entirely deprived of bone and fat, and is free from gelatine. One pound of this Extract represents twenty pounds of Beef; and the preparation is conducted at so low a temperature, that the preservation of the "highly nitrogenized" principles is insured.

13927

July 15. 1875

Boeckeria

Rhizome tr. lobum 1. L. Cabana E ined

Rh. B. lobum

Fascicul. f. teres periph

nulli

Stomata nulla veg. submersa

2. L. Carolinis L 1753

3. L. pygmaea E 1874

4 L. Tuckermi B 1868

5 L. cebadesp. var Brun 1864

5t perpusa ——— enervata (1864 Sm

5t plena ——— ampla? ——— Boottii (Br 1868

6 L. granulata E ined

7 L saccharata E 1868

8 L. Bolanderi E 1874

9 L. riparia E 1846

Fascic. fib. periph — stomata

veg submersa? 10. L. flaccida Shuttlw 1846

Chapmaniana ined

veg. aphylla 11 Englemanni Br 1846

gracilis 1868

valida 1868

Georgiana ined

veg submersis 12 melanopoda 1864 Gr

ined

13 Alabamensis E

14 Nuttallii Br 1874

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VINUM CIBI.

SHERRY WINE AND BEEF.

The advantage of administering Beef with Wine to patients requiring both nutriment and a stimulant, will be readily appreciated—the sustaining and nutritious effect of the beef often enabling delicate and sensitive invalids to take the wine with benefit, when ordinarily they would be unable to take it even in small quantities without occasioning headache, &c.

ADULT DOSE.—One tablespoonful between meals, or when exhausted. Children in proportion to age.

Each tablespoonful contains one half ounce sherry wine and one ounce of beef.

MANUFACTURED BY

JOHN WYETH & BROTHER,

Chemists,

No. 1412 WALNUT STREET,

PHILADELPHIA.

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Dates from Gray's Herbarium Dec 1866

1865	July 30 Aug 6th	I. Tuckermani	W. Boott	mixed with Braunii
1848	Aug	" "	Ed Tuckerman	" Mystic R.
1843		I. acuminata	White Mountains	D. Tuckerman
1863	Aug	I. Braunii	Horace Mann	Mt Mansfield Vt. on a small pond near the summit
1863	Sept	" "	H. Mann	Concord, Mass
1863	Sept 23.	" "	" "	Lake Winnipesaugee N.H.
1864	Aug 30	" "	J. W Robbins	Uxbridge Mass
1859		I. oocl. Lapham		Kennebunk, Maine
1861	I. [illegible]ata		W Boott	Woburn
1862	July 5th	I. alida	F C Porter	Smithville
1860	———	I. Engelmanni Lapham	C Tetnall	Wilmington
1858	———	I. Lapham	"	"

specimens sent to Gray & Lapham
Lapham Letter Dated Jan 10 1859

1864 I. riparia Robbins, Uxbridge

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Isoetes prolifera = Botan Zeitung 1879 N2 1
observed by K Goebel.

Isoetes lacustris & echinospora from deep water in the Longemer Lake of the Vosges had all very abundant in the place of the (wanting or absent) sporangia; not from germinating spors, such is sometimes the case, but single plantlets. At last the leaf rots and falls off and the plantlet vegetates independently,

13480

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Isoetes localities in N States & Canada

Canada	Hastings, Can. West, Partridge Lake	Crow river L. Marcoun,		echinospora, Braunii, riparia, L. Engelmanni, L. Braunii
	Saskatchawan	Drummond		I. Lacustris, riparia, I. Braunii
Maine	Cornish,	J. W. Chickering	in Hb. Eaton	I. Braunii ? riparia
	Kennebunk		in Hb Gray	I. Engelmanni, riparia
	Mooselake near Kennebec River	C E Smith 1867		I. Braunii
New Hampshire	Echolake	Tuckerman[1843], Engelmann 1856		I. Lacustris var
	"	Booth		I. Braunii
	Lake Winnepesaugee	Engelmann 1856 Mann		I. Braunii
Vermont	Mount Mansfield	Mann		I. Braunii ?
	Brattleborough	C C Frost	in Hb. Eaton Gray & Engelm	I. riparia
	" "	" "	Hb Gray & Engelm	I. Engelmanni, gracilis var.
	" "	" "	H Engelm	I. riparia
	Lake Dunmore	Dr A W Chapman 1859	H. Engelm.	I. Braunii

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Massachusetts	Boston, Mystic Pond	Tuckerman,	Boott	J. Tuckermani
"	" "	"	Boott	J. Braunii
"	Woburn		Boott	J. muricata
"	Arlington (West Cambridge)		Boott	J. Englemanni & var Boottii
	Concord		Mann, Boott	J. Braunii
	Grafton		Robbins 1866	" "
	Holbridge		Robbins 1845	" "
	"	"	1831	J. nipania
	"	"	~~1864~~	~~J. Leptoc~~
	"	"	1840, 1845	J. Canadensis
	Blackstone River near Holbridge	"	1864 stricta	J. nipania
	Fresh Pond, Cambridge		Boott 1867	J. Canadensis
			Ryt Bridges, Hc Durand	
Rhode Island	Newport		Ryt Thurber	J. Englemanni var
	Providence		Olney	J. Braunii gracilis
Connecticut	New Haven		Eaton	J. Englemanni var gracil
	Colebrook		Robbins 1864	" " " gracil
New York	Catskill		Schweinitz ? Hart Acad Phil & others	J. Canadensis
	"		Clinton	J. Braunii
	Niagara		Eaton "	" "
	Adirondacks 5 M. west of Lake George		L. Lesquereux	" "
	Lawrence Lake		Clinton 1867	" "

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New Jersey	Chester		Austin	J. Leptura
	Camden		Durand	" "
	Banks of Delaware		Nuttall, Jaeger & S. riparia	
	Passaic River		Davis	J. Leptura
	Toms River, Ocean Co		P E Smith & Baker	J. Brunii pauperula
Pennsylvania	Banks of Delaware		Nuttall 1815 & &	J. riparia
	Lancaster Co.		Porter 1862	J. Leptura vel sp.
	Chester Co		Darlington	" "
	Darby		Dr J. G. Hunt	" "
	Bethlehem		Moser 1832 Durand	" "
	"		Durand & Hubbard	?? J. Lecontei physical
	"		"	riparia
	Pocono Mountain	1867	Wm M Canby (& Porter & Green)	J. Brunii
Delaware	Banks of River		Canby, Commons	J. riparia
	Wilmington &		Tetrault 1858, Canby, Commons	J. Leptura 1866 & vanolsh

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Maryland	Salisbury	Canby (1863?)	I. sacchanta
Virginia	Eastville on Eastern shore	Canby 867	I. Engelmanni
	Salt Pond Mtn	S.W. Va. Canby 1869	I. Engelm
Georgia	Okapun.		I. Engelm var
	Canby		I. melanocarpa
Florida	Lake Jamonia	Riegel Garber & Curtis	I. glaucifolia
	Marianna	Chapman	I. Chapmanii
Texas		Hall	I. melanocarpa var
	Dr Lewis	Buckley	I. Buckleyi
Missouri	St Louis	Riehl & Engelmann 1842	I. Engelmanni
Michigan	Sault St Marie	Porter & Leiby 1865	I. Canadensis
Illinois	Athens	Hall	I. melanocarpa
	Ridgwood	Vasey	" "
Iowa	Clinton	Vasey	I. melanocarpa
Idaho	Geyser 1843.	Coeur d'Alene	I. Nuttallii
Montana	Parry	Yellowstone Lake	I. Bakeri
Utah	Jones	~~Utah, Utah~~ Sandberg	I. Bolanderi
	Watson	Uintah Mts	I. alnifolia var
Oregon		Nuttall, 1833 Geyser 1843	I. Nuttallii
California		Bolander 1866	I. Californica
		"	I. pygmaea

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